

HEPATITIS B

I. INTRODUCTION

Hepatitis B is caused by infection with the Hepatitis B virus (HBV). In 2014, there were and estimated 19,200 incident cases in the United States. Over one million chronically infected HBV carriers are living in the United States. Most cases of acute viral hepatitis are asymptomatic. Some experience a flu-like illness, and a few are jaundiced.

The hepatitis B virus (HBV) is usually spread by transfer of blood or body fluids. Chronic carriers are at risk of infecting their offspring and household and sexual contacts. Infectious persons test positive for hepatitis B surface Antigen (HBsAg).

Preventing HBV transmission during early childhood is important because of the high likelihood of chronic HBV infection and chronic liver disease that occurs when children less than five years of age become infected. Testing to identify pregnant women who are hepatitis B surface antigen (HBsAg) positive, and providing their infants with immunoprophylaxis, effectively prevents HBV transmission during the perinatal period.

Pregnancy is not a contraindication to hepatitis B vaccination or hepatitis B immunoglobulin administration.

In addition to routine infant hepatitis B vaccination and the wide-scale implementation of vaccination programs for adolescents, vaccination of adults at high risk for HBV has become a priority in the strategy to eliminate HBV transmission in the United States.

Blood, sera, saliva, semen, and vaginal fluids have been shown to be infectious. Clinic staff should follow DHMH Infection Control Guidelines and standard precautions for handling blood, specimens, and instruments.

II. SCREENING, VACCINATION AND HBV PROPHYLAXIS

- A. Clients at risk for HBV infection should be offered testing for the presence of HBsAg (Appendix A). Those who test positive should be referred to specialists for ongoing monitoring and medical care.
- B. Clients who are at risk for HBV infection (Appendix A) and who test negative are candidates for the vaccine series.
- C. Maryland has a childhood vaccination mandate for Hepatitis B.
- D. Vaccination may be received during pregnancy. For more information regarding perinatal HBV prophylaxis and vaccination, visit the DHMH – Infectious Disease and Environmental Health Administration, Immunization Division, Maryland Perinatal Hepatitis B Program website at <http://ideha.dhmh.maryland.gov/IMMUN?maryland-perinatal-hepatitis-b-program.aspx>. Or contact the Maryland Perinatal Hepatitis B Prevention Program, DHMH – Immunization Division at 410-767-6679 or 410-767-5716.

- E. Clients who have had sexual contact with acutely infected persons should receive HBV immunoglobulin followed by the vaccine series.

III. MANAGEMENT AND CLIENT EDUCATION/COUNSELING

- A. Clients who test positive (presence of HBsAg) should be referred for a medical evaluation which includes liver function profile and complete hepatitis work-up. These clients may be candidates for treatment.
- B. Clients who test positive should receive education and counseling on the implications of the chronic carrier state, and on the means to prevent transmission to sexual contacts and household members. If the client is pregnant, she should be referred to prenatal care and receive information on perinatal HBV prophylaxis.

IV. HEPATITIS B AND CONTRACEPTIVE MANAGEMENT

- A. Combined hormonal contraception should not be given to clients with active viral hepatitis or to women who remain positive for HBsAg and have abnormal liver function studies (MEC category 3/4 for initiation, category 2 for continuation).
- B. Combined hormonal contraception may be considered for clients with a history of HBV infection when recommended by a medical doctor who agrees to monitor the client for evidence of complications of her chronic disease (MEC category 1 for initiation or continuation).
- C. Hepatitis B is not a contraindication for other forms of contraception.

V. REPORTING

Maryland law requires provider and laboratory reporting of all cases of Hepatitis B infection. Reporting instructions and forms can be accessed via the Maryland DHMH: <http://phpa.dhmh.maryland.gov/Pages/reportable-diseases.aspx>

VI. FOLLOW-UP

- A. Sexual contacts and household members of the woman with chronic HBV infection should be tested, and susceptible persons should receive the vaccine series.
- B. Persons in high-risk occupations should receive immunization in connection with their employment

REFERENCES

Sexually Transmitted Diseases Treatment Guidelines. 2015

Centers for Disease Control and Prevention. U.S. Medical Eligibility Criteria for Contraceptive Use, 2016. MMWR / July 29, 2016 / Vol. 65 / No. 3

APPENDIX A

POPULATIONS FOR WHOM HEPATITIS B TESTING IS RECOMMENDED

1. Pregnant women
2. Infants born to HBSAg-positive mothers
3. Sex partners of HBSAg-positive individuals
4. History of injection drug use
5. History of sexually transmitted diseases, especially HIV
6. Household contact with an HBV carrier
7. Multiple sexual partners
8. Men who have sex with men
9. Sexual partners of bisexual men and intravenous drug users
10. Work in a health care or public safety field
11. Work or residence in an institution for the developmentally disabled
12. Work or residence in a detention facility
13. Receipt of blood components for medical indications, especially hemodialysis patients
14. Immigrants/refugees or travelers from areas of with intermediate or high rates of Hepatitis B (HBSAg prevalence $\geq 2\%$)
15. U.S.-born individuals not vaccinated as infants whose parents were born in regions with high rates of Hepatitis B (HBSAg prevalence $\geq 8\%$)
16. Persons with abnormal liver function tests not explained by other conditions
17. Persons who require immunosuppressive therapy

APPENDIX B

INTERPRETATION OF THE HEPATITIS B PANEL

TESTS	RESULTS	INTERPRETATION
HBsAg anti-HBc anti-HBs	negative negative negative	susceptible
HBsAg anti-HBc anti-HBs	negative positive positive	immune due to natural infection
HBsAg anti-HBc anti-HBs	negative negative positive	immune due to hepatitis B vaccination
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive positive negative	acutely infected
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive negative negative	chronically infected
HBsAg anti-HBc anti-HBs	negative positive negative	four interpretations possible*
<p>*</p> <ol style="list-style-type: none"> 1. May be recovering from acute HBV infection. 2. May be distantly immune and test not sensitive enough to detect very low level of anti-HBs in serum. 3. May be susceptible with a false positive anti-HBc. 4. May be undetectable level of HBsAg present in the serum and the person is actually a carrier. 		

SOURCE: National Center for Infectious Diseases. Interpretation of the Hepatitis B Panel. 2006.